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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,175	12/30/2003	Danh Dang	015114-069800US	5032

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EXAMINER

TRIMMINGS, JOHN P

ART UNIT	PAPER NUMBER
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2117

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/750,175

Applicant(s)

DANG ET AL.

Examiner

John P. Trimmings

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



GUY LAMARRE
PRIMARY EXAMINER

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This office action is in response to the applicant's amendment dated 3/19/2007.

The applicant has amended claims 8, 13 and 15-20.

The applicant has added claims 21-26 as New.

Claims 1-26 are pending.

Response to Amendment

1. In view of the applicant's submission of new drawing FIG. 1, the examiner withdraws the objection to said drawing and approves the entry of FIG. 1.
2. In view of the applicant's amendments to claims 8 and 13, the examiner withdraws all objections to the said claims.
3. In view of the amendments to claims 8-10 and 11, the examiner withdraws the rejections of said claims under 35 USC 112 second paragraph.
4. In view of the amendment to claim 15, the examiner withdraws the rejection of said claim under 35 USC 101 as being non-statutory.
5. Applicant's arguments filed 3/19/2007 in respect to claims 1-20 have been fully considered but they are not persuasive. The applicant, in arguing the claims, has specifically cited the same limitation in each of the independent claims 1, 8 and 15, and

that argument is, that Herron fails to disclose boundary scan registers. The examiner, in response to the applicant's argument that the scan chain of Herron teaches a series of latches, but does not teach a series of registers as is claimed in each of the independent claims of the application, is rebutted as follows:

In answering the argument, the examiner would like to point to Herron, column 19 lines 33-40, where it is disclosed that, "... a plurality of **shift registers** within the FPGA fabric are configured as a scan chain 2904 to facilitate the transmission of test vectors ..." (emphasis added by examiner). The examiner feels that this quotation definitively teaches Herron's "latches" as being configured together to form "scan chains", or *shift registers*. Therefore, in view of the answer herein, the examiner maintains the rejections of claims 1-20 as outlined in the examiner's previous office action.

Drawings (New)

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the new limitation of claims 22, 24 and 26, where the input register has "... an output coupled to an input of the multiplexer.", must be shown or the feature canceled from the claims. The examiner has failed to find a drawing that connects the input register output directly back to an input of the multiplexer. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112 (New)

7. Claims 22, 24 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The limitation of each claim, that connects the input register output directly back to an input of the multiplexer has not been disclosed in the original specification, and so the claim, being unsupported by the disclosure, is rejected.

Claim Rejections - 35 USC § 103 (New)

8. Claims 21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al., (herein Herron), U.S. Patent No. 6996758 as applied to claims 1, 8 and 15 above, and further in view of Tseng, U.S. Patent Application Publication No. 2004/0081208. Herron further teaches method of claim 1, the medium of claim 8, and the device of claim 15 wherein when the reconfigurable device is configured in the test configuration, the set of functional blocks are configured to implement the set of boundary scan registers, the set of boundary scan registers including at least one input register, the input register having an input coupled to an output of a multiplexer (see column 18 lines 6-63 of Herron for all of the above) but fails to teach feeding the output register to a logic gate. But the analogous art of Tseng teaches an output coupled to a first input of a logic gate (see FIG. 3 where for example, scan register 21 may feed output 213 to an and gate 31 as depicted in FIG. 4A), where a select input for the multiplexer (FIG. 3 31 may also be a multiplexer as in FIG. 4D) is coupled to a second input of the logic gate (where FIG. 3 EN₁ is an input of AND gate in FIG. 4A) and an output of the logic gate is coupled to an input of the IP core (OB₂ through register 22). And in paragraph [0006] the advantage stated is a scan chain device that allows for better control and observation of a scan chain. One with ordinary skill in the art at the time of the invention, motivated as suggested, would have found it obvious to apply the features of Tseng to the scan chain of Herron, including the options of using various logic between stages, in order to better control and observe the scan data.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

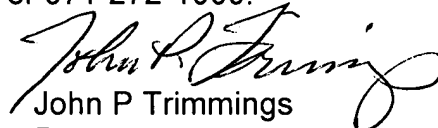
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Trimmings whose telephone number is (571) 272-3830. The examiner can normally be reached on Monday through Thursday, 7:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Guy Lamarre can be reached on (571) 272-3826. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


John P Trimmings
Examiner
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jpt



10/750175 replacement sheet

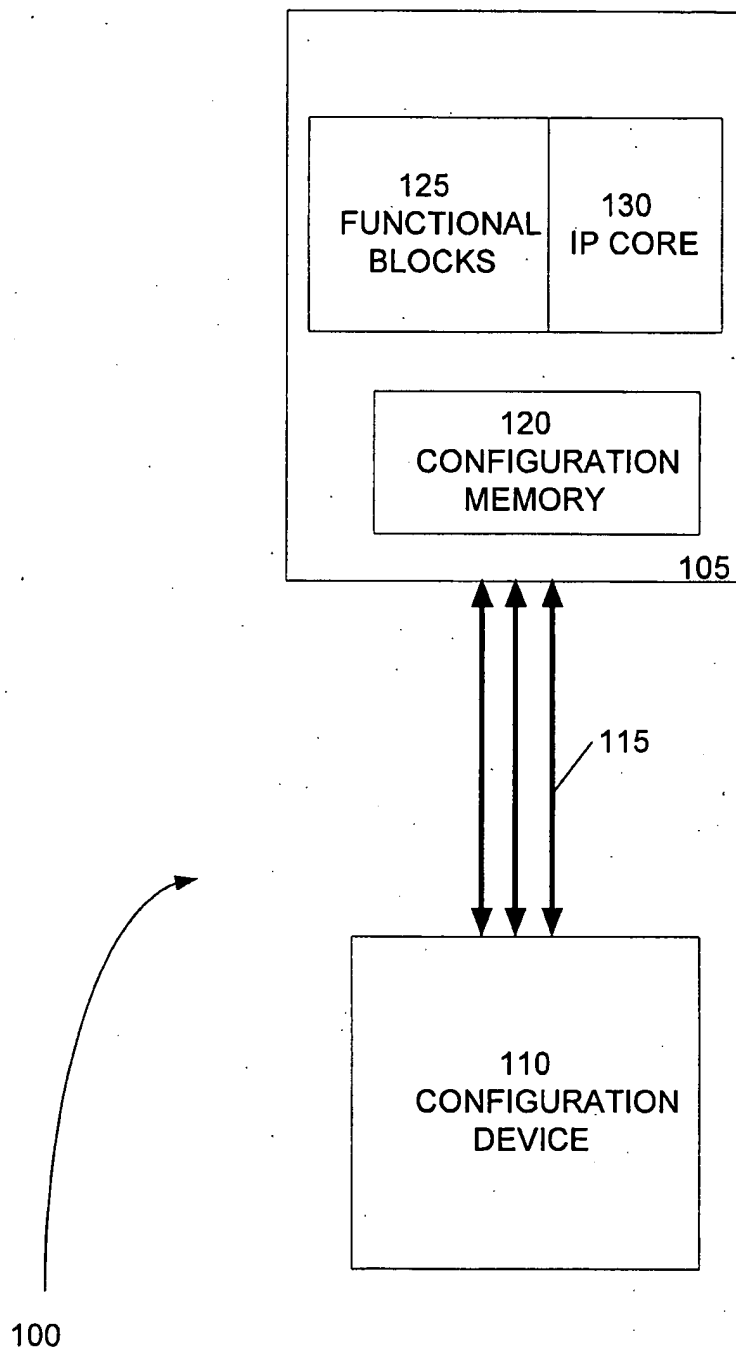


FIG. 1 (PRIOR ART)